

Title: Sealable Lid for Vacuum Distillation Apparatus

Serial No.: 09/545,137

Filed: 04/07/2000

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, and listings of claims in the application. Please amend Claims 7, 9, and 16 as indicated in the Listing of Claims.

Listing of Claims

1. (Currently Amended) A sealable lid assembly for a manhole of a ~~vacuum distillation apparatus utilized to recover photopolymer solvent vessel~~, comprising:
 - a flange surrounding the manhole and extending outwardly from the vessel to a distal end;
 - at least one wall extending from the flange proximate the distal end to define a channel;
 - a shaft extending outwardly from the vessel proximate the manhole;
 - a lid pivotally and telescopically mounted to the shaft capable of releasably and sealably engaging the flange;
 - a protrusion extending outwardly from the lid and insertable into the channel;
 - at least one wheel rotatably mounted to the lid;
 - at least one elongated track extending outwardly from the vessel in a position to engage the at least one wheel and raise the lid vertically above the flange as the lid pivots; and
 - at least one clamp assembly releasably contracting the lid into sealable engagement with the flange.
2. (Originally Presented) The sealable lid assembly as claimed in claim 1, further comprising a handle extending outwardly from the lid for assisting an operator in pivoting the lid.
3. (Originally Presented) The sealable lid assembly as claimed in claim 1, wherein two wheels rotatably mounted to the lid and two spaced-apart tracks are disposed on the vessel in positions to respectively engage the wheels, whereby binding of the lid is reduced as the lid pivots and moves vertically along the shaft.

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4. (Originally Presented) The sealable lid assembly as claimed in claim 1, further comprising a gasket disposed within the channel releasably and sealably engaging the protrusion.

5. (Originally Presented) The sealable lid assembly as claimed in claim 4, wherein the gasket either comprises or is coated with a tetrafluoroethylene fluorocarbon polymer, a fluorinated ethylene-propylene resin, or a mixture thereof.

6. (Originally Presented) The sealable lid assembly as claimed in claim 1, wherein the at least one clamp assembly comprises:

a threaded bolt pivotally mounted to the vessel;
a wing nut having mating threads rotatably disposed on the bolt; and
a receiver mounted to the lid and having a U-shaped slot capable of receiving the bolt, whereby the lid is sealed by placing the bolt into the U-shaped slot and rotating the wing nut in one direction to exert pressure against the receiver and released by rotating the wing nut in the opposite direction and pivoting the bolt out of the U-shaped slot.

7. (Currently amended) The sealable lid assembly as claimed in claim 1, wherein the at least one clamp assembly comprises:

a clamp pin mounted to the vessel and
a J-shaped clamp positioned on the lid to removably engage the ~~claim~~ clamp pin,

whereby the lid is sealed by engaging the J-shaped clamp with the clamp pin and ~~release~~ released by disengaging the J-shaped clamp from ~~latch~~ clamp pin.

8. (Originally Presented) The sealable lid assembly as claimed in claim 1, wherein the lid comprises a substantially dome-shaped top and a substantially planar bottom, wherein the top and bottom in combination define a chamber.

9. (Currently Amended) The sealable lid assembly as claimed in claim 8, further comprising: insulation disposed within the cavity.

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10. (Originally Presented) The sealable lid assembly as claimed in claim 8, wherein the protrusion extends from the bottom.

11. (Originally Presented) The sealable lid assembly as claimed in claim 1, wherein the at least one track has a rounded shoulder and an elongated ramp extending from the shoulder along an angle of about 30° to about 45° with respect to the distal end of the flange.

12. (Originally Presented) A sealable lid assembly for an opening of a vessel, comprising:

a flange extending outwardly from the vessel to a distal end and surrounding the opening to define a manhole;

at least one wall extending from the flange proximate the distal end, the wall and the flange defining a channel for receiving a gasket;

a lid pivotally and telescopically mounted to the vessel capable of releasably and sealably engaging the gasket disposed within the channel;

at least one wheel rotatably mounted to lid;

at least one elongated track extending outwardly from the vessel in a position to engage the at least one wheel and raise the lid vertically above the flange as the lid pivots; and

at least one clamp assembly releasably contracting the lid into sealable engagement with the flange.

13. (Originally Presented) The sealable lid assembly as claimed in claim 12, further comprising a handle extending outwardly from the lid for assisting an operator in raising and pivoting the lid.

14. (Originally Presented) The sealable lid assembly as claimed in claim 12, further comprising a gasket disposed within the channel releasably and sealably engaging the lid.

15. (Originally Presented) The sealable lid assembly as claimed in claim 12, wherein the at least one clamp assembly comprises:

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a threaded bolt pivotally mounted to the vessel;
a wing nut having mating threads rotatably disposed on the bolt; and
a receiver mounted to the lid and having a U-shaped slot capable of receiving the bolt, whereby the lid is sealed by placing the bolt into the U-shaped slot and rotating the wing nut in one direction to exert pressure against the receiver and released by rotating the wing nut in the opposite direction and pivoting the bolt out of the U-shaped slot.

16. (Currently Amended) The sealable lid assembly as claimed in claim 12, wherein the at least one clamp assembly comprises:

a clamp pin mounted to the vessel and
a J-shaped clamp positioned on the lid to removably engage the ~~claim~~ clamp pin,

whereby the lid is sealed by engaging the J-shaped clamp with the clamp pin and release by disengaging the J-shaped clamp from latch pin.

17. (Originally Presented) The sealable lid assembly as claimed in claim 12, wherein the lid comprises a substantially dome-shaped top and a substantially planar bottom, wherein the top and bottom in combination define a chamber.

18. (Originally Presented) The sealable lid assembly as claimed in claim 17, further comprising a protrusion extending from the bottom and insertable into the channel.

19. (Originally Presented) The sealable lid assembly as claimed in claim 17, further comprising insulation disposed within the cavity.

20. (Originally Presented) The sealable lid assembly as claimed in claim 12, wherein the at least one track has a rounded shoulder and an elongated ramp extending from the shoulder along an angle of about 30° to about 60° with respect to the distal end of the flange.